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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,596	02/12/2004	Gregory J. Fredeman	FIS920040021US1	4927

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EXAMINER

YOHA, CONNIE C

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/777,596	Applicant(s) FREDEMAN ET AL.	
	Examiner Connie C. Yoha	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/7/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12-18 and 22-24 is/are rejected.
- 7) ☐ Claim(s) 6-11 and 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


CONNIE C. YOHA
PRIMARY EXAMINER

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Amendment filed on 11/7/05 has been entered and are made of record.
2. Claims 1-24 are pending.
3. Claims 1, 3, 12-13, 15-16 and 20-23 are amended.

Response to Arguments

- 4 Applicant's argument filed 11/7/05 has been fully considered.
Applicant's arguments with respect to claim 1-24 have been considered but are moot in view of the new ground(s) of rejection. Examiner uses new cited reference Shimano et al, U.S. Pat. 6388929 to reject claim 1-24.

Claim Objections

5. Claim 4 and 17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

In claim 4, the limitation of "wherein said means" is not understood by examiner to be which means, the redundancy allocation means in claim 1 or the second means in claim 2?

In claim 17 recite the limitation: "a redundancy allocation" on line 3, which has already mentioned in the depended claim 15.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 15-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 15, starting at lines 7, the limitation: "redundancy allocation means for enabling at least two of said banks in a multi-bank mode for accepting expected data, wherein said redundancy allocation means enables said data comparison means to detect if data bits read from one of said banks match corresponding expected data only when the identification means identifies said corresponding bank during said multi-bank operation" is not described in the specification. Examiner tried to look for support in how the redundancy allocation means can enables at least two of the banks in a multi-bank operation and that it also enable the data comparison means when one of the two selected banks is identified by the identification means. Applicant has failed to described the enablement of such claimed limitation and since examiner cannot support for such claimed limitation, the claim also being rejected for containing new matter.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-5, 12-16, 18, 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimano et al, Pat. No. 6388929.

With regard to claim 1, Shimano discloses a memory device configured to perform multi-bank operations comprising: a plurality of memory banks (fig. 2, MA0-MA_n) including at least a first and second memory bank (fig. 2, MA0, MA1) respectively controlled by a first and a second redundancy replacement means (fig. 2, SRA) (col. 9, line 8-10); and a redundancy allocation means (fig. 2, 100, including ALGP unit 120) for allocating redundancy elements by way of performing a comparison of data bits read out from said first memory bank (assuming memory bank MA0 of fig. 2 is selected) against corresponding expected data, said data bit comparison occurring only when said first bank is addressed during a multi-bank operation (col. 10, line 29-33).

With regard to claim 2, Shimano discloses a second means (fig. 2, 100 which includes ALPG unit 120 is also used when the second bank MA1 is selected) for comparing the data bits read out of said second memory bank against corresponding expected data, said comparison occurring only when said second bank is addressed during a multi-bank operation (col. 10, line 29-3).

With regard to claim 3, Shimano inherently disclosed wherein the period of said comparison is longer than the bank-to-bank access cycle time of the multi-bank operation (the operating time is naturally would take longer to conduct the comparison operation than it would to just accessing the bank-to-bank operation.) (also with regard to claim 12 and 13).

With regard to claim 4, as far as understood, Shimano discloses wherein said means (fig. 2, 100) selects either the first or the second bank to perform said comparison and wherein said comparison is enable only when the selected bank is address (col. 10, line 11-33) (also with regard to claim 5).

With regard to claim 14, Shimano discloses further means for fetching address bits only when comparing means compares data bits read out from said memory bank against corresponding expected data (col. 10, line 20-48).

With regard to claim 15, as far as understood, Shimano discloses a memory device configured to perform multi-bank operations comprising: a plurality of memory banks (fig. 2, MA0-MAn) wherein at least two banks are supported by separate redundancy replacement means (fig. 2, SRA) (col. 9, line 8-15); identifying means for identifying one bank of said plurality of memory banks (col. 8, line 61-col. 9, line 7; a comparison means (fig. 2, 129); redundancy allocation means for enabling at least two of the said banks in a multi-bank mode in a multi-bank mode for accepting expected data, wherein said redundancy allocation means enables said data comparison means to detect if data bits read form one of the banks matched corresponding expected data

only when said identification means identifies said corresponding bank during said multi-bank operation (col. 10, line 20-33).

With regard to claim 16, Shimano discloses further an address storage means (fig. 3, 126) for storing read address bits therein only when said identification means identifies a predetermined bank during the multi-bank operation.

Drafted as Method claim

8. As per claim 18, and 22-24 encompasses the same scope of invention as to that of claim 1-5 and 12-16 except they are draft in method format instead of apparatus format. The claims are therefore rejected for the same reason as set forth above.

Allowable Subject Matter

9. Claim 6-11 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1ST paragraph, set forth in this Office action and rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

The prior art of record does not show in combination with other features, the interconnection of the comparison means being a dynamic exclusive OR circuit comprising: a first transistor coupled to the data, to a first node, and to a second node, a second transistor coupled to the complement of the expected data, to a first voltage

source, and to said first node, a third transistor coupled to the complement of said data, to a third node, and to the second node, and a fourth transistor coupled to the expected data, to the first voltage source, and to the third node, such that the second node follows the first voltage source only if no match of the data to the expected data occurs.

Prior art of record also does not show in combination, a plurality of address registers, each of which supports corresponding banks; means for enabling a redundancy allocation to a predetermined memory bank during said multi-bank operation; means for switching said redundancy allocation to another of said memory banks and for switching an address register to said another memory bank; means for enabling the redundancy allocation to all of said memory banks during the multi-bank operation by applying an addressing pattern to all of said memory banks during the multi-bank operation.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

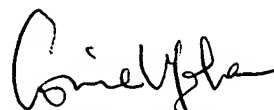
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, Amir Zarabian, can be reached at (571) 272-1852. The fax phone number for this Group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-0956.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


C. Yoha

January 2006


CONNIE C. YOH
PRIMARY EXAMINER